

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A method for the conversion of a coal-containing feedstock to a gas product comprising methane, comprising contacting said coal feedstock with a treatment gas comprising at least about 40 weight percent H₂ at a reaction temperature of at least about 600°C for a time sufficient to convert at least about 90 percent of the volatile matter in the coal-containing feedstock to methane and form a purified carbon product.

2. (Original) A method as recited in Claim 1, wherein said coal feedstock comprises low-grade coal having a sulfur content of at least about 2 weight percent.

3. (Currently Amended) A method as recited in Claim 1, wherein said reducing treatment gas comprises at least about 99 weight percent H₂.

4. (Currently Amended) A method as recited in Claim 1, wherein said reducing treatment gas is formed by steam oxidation of iron.

5. (Currently Amended) A method as recited in Claim 1, wherein said reducing treatment gas comprises H₂ and CO.

6. (Currently Amended) A method as recited in Claim 1, wherein said reducing treatment gas is formed by partial oxidation of carbon.

7. (Original) A method as recited in Claim 1, wherein said reaction temperature is from about 700°C to about 900°C.

8. (Original) A method as recited in Claim 1, further comprising the step of combusting at least a portion of said methane to generate electricity.

9. (Original) A method as recited in Claim 1, further comprising the step of combusting at least a portion of said methane in a combined cycle generator to generate electricity.

10. (Original) A method as recited in Claim 1, further comprising the step of

reacting said purified carbon product and at least a portion of said methane in a boiler to generate electricity.

11. (Original) A method as recited in Claim 1, further comprising the step of diverting at least a portion of said treatment gas and combining said portion with said methane.

12. (Withdrawn) A method for the conversion of a coal-containing feedstock to a gas product comprising methane, comprising the steps of:

- a) forming a H₂/CO treatment gas by the partial oxidation of carbon;
- b) contacting said H₂/CO treatment gas with a coal feedstock at a reaction temperature of from about 700°C to about 900°C and for a reaction time sufficient to convert at least a portion of the volatile matter in the coal-containing feedstock to a product gas comprising methane;
- c) recovering a purified carbon product from said contacting step; and
- d) recycling at least a first portion of said purified carbon product to said step of forming a H₂/CO treatment gas.

13. (Withdrawn) A method as recited in Claim 12, further comprising the step of transporting at least a second portion of said purified carbon product to a boiler and combusting said purified carbon product.

14. (Withdrawn) A method as recited in Claim 12, further comprising the step of transporting at least a second portion of said purified carbon product to a boiler and combusting said purified carbon product with at least a portion of said methane.

15. (Withdrawn) A method as recited in Claim 12, further comprising the step of combusting at least a portion of said methane in a combined cycle generator.

16-23. (Cancelled)